

A NEW LEMANEA FROM NEWFOUNDLAND.—*Lemanea* (*Sach-eria*) *borealis*. Sexual shoots evenly tufted, slender, 1–3 cm. or more long by 0.25–0.33 mm. in diameter: sterile base 0.5–1 cm. long, slender, gradually tapering into the fertile portion, the transition very rarely abrupt: antherid zone when young prominently tuberculate with 2–5 antherid papillae, these disappearing in age so that the older shoots are plane: procarp zone usually cylindrical, rarely constricted in the middle, sometimes slightly so near the apex, the result being that in age, with the disappearance of the antherid papillae, the shoots are nearly or quite cylindrical, the younger and middle-aged ones appearing slightly nodose: procarps arising in both the antherid zone and procarp zone, but not quite reaching the middle of the procarp zone: carpospores in tufts throughout the entire length of the shoot, not collected at the antherid zones as in *L. fucina* and its varieties, but not extending so closely to the middle of the procarp zone as in *L. fluvialilis*: carpospores elliptical to oblong, 25–45 μ \times 18–25 μ : *Chantransia* stage represented only by fragments at season when collected, but threads 18–25 μ in diameter, cells 35–45 μ long, often slightly constricted at the septa: plants of a dull green color on drying, the spores sometimes showing a tinge of blue, and darkening, but not blackening the shoots: species of a parasitic *Chantransia* (*C. violacca*) sometimes present on the old shoots.

On rocks in a waterfall, Bay of Islands, Newfoundland, August 9, 1901, no. 1108. C. D. Howe and W. F. Lang.

These specimens agree with those collected by J. B. Fowler in Nepisiguit River, N. B.; and by J. Macoun in Pirates' Cove, Nova Scotia, and listed as small specimens of *Lemanea* (*Sach-eria*) *fucina* Bory, var. *rigida* (Sirodot) on page 226 of my Monograph,* which forms should now be referred to this species.

GEORGE F. ATKINSON.

BOTANICAL DEPARTMENT, CORNELL UNIVERSITY.

REVIEWS

The Grass Family as treated in Urban's Flora of Porto Rico †

The great interest taken of late years in the flora of the West Indies has made the appearance of the initial parts of the Flora

* Monograph of the Lemnaceae of the United States. Ann. Bot. 4: 177–229. pt. 7–9. 1890.

† Urban, I. Flora Portoricensis, Symb. Antill. 4: 76–109. 1903.

of Porto Rico, by Dr. I. Urban, a matter of considerable moment. The first instalment comes as fascicle I, Vol. IV, of his *Symbolae Antillanae*, and treats of the Pteridophyta, and of the Spermatophyta as far as the Chloranthaceae. The grass family is naturally the one of especial interest to the reviewer, the more so as he published a few months ago a preliminary enumeration of the grasses of the same region, basing his work upon the material in the herbaria of the New York Botanical Garden.

The material for the work here reviewed has been determined in the main by Professor E. Hackel, but some few of the genera have been revised by other students of this family: *Arundinella*, *Cenchrus*, *Aristida*, *Bouteloua*, *Leptochloa*, *Phragmites* and *Eragrostis* by Dr. Pilger; and *Panicum* and *Paspalum* by Dr. Mez.

That this work will be of great value to students of the grasses of the West Indies, it is hardly necessary to state. There are accredited to the island 38 genera and 125 species, with a few subspecies and varieties. This must represent a large proportion of the entire grass flora of the island, and the size of this list but emphasizes a marked deficiency in the work, the entire absence of keys of any kind, not alone to the species, but also to the tribes and genera. This want seriously curtails the usefulness of the work to any but specialists and is to be the more regretted, as it is but intensified by contrast with other admirable features, notably the full citation of synonymy, localities, and specimens.

In the matter of nomenclature, the work is for the most part up to date, and carried along on consistent lines, but one cannot but note such exceptions as these, and wonder at their retention: *Setaria* and *Leersia*, homonyms, are maintained, and *Chactochloa* and *Homalocenchrus*, both available, are reduced to synonymy; and *Eriochloa* Kth., although published three years later than *Monachne* Beauv., is preferred to that genus.

In the matter of generic limitations a conservative course has been pursued, and as conservatism is often but another name for tradition, inconsistencies have crept in here and there. This is especially noticeable in the treatment of the Paniceae. Here *Chactochloa* Scribn. (*Setaria* Beauv., as they persist in calling it, although

a homonym) and *Isachne* are held as distinct from *Panicum*, while *Syntherisma* and *Echinochloa*, equally as valid genera, are merged in that polymorphic receptacle *Panicum*; and again, *Paspalum*, the line between which and *Panicum* is so frail at times as to be all but lost, is maintained, and is also made to include *Anastrophus*, which certainly is as distinct from *Paspalum* as that genus is from *Panicum*.

Most of the species published by the writer in his recent enumeration of the grasses of this same region* have been maintained in this work. In some instances, however, these have been reduced to synonymy. As in one instance this is due apparently to a misunderstanding of the species involved, I cannot refrain from entering into it quite in detail. I refer to the reduction of my *Paspalum Underwoodii* to the synonymy of *Paspalum lentiginosum* Presl. It is difficult to understand how any one who has read the original description of *P. lentiginosum* can come to the conclusion maintained in the work under consideration, for *P. Underwoodii* is in no way related to that species. Presl's species was described from material collected in Mexico, a country from which I have not seen a specimen of *Paspalum Underwoodii*, which, so far as I know, is confined to the West Indies. In the tenth annual report of the Missouri Botanical Garden, in an article by Professor Scribner on the grasses of Haenke in the Bernhardt Herbarium, will be found a discussion of this species of Presl. Among these Haenke specimens was one labeled in Presl's handwriting, *Paspalum lentiginosum*, and from this a drawing was made, of which Plate 13 in the report referred to above is a reproduction. Professor Scribner states that Palmer's no. 1556, collected at Culiacan, Mexico, in 1891, is the same as this, and certain it is that this specimen agrees closely with Presl's description and with the plate referred to above. Haenke's American specimens were from the Pacific coast, and Culiacan is on the west coast of Mexico. *Paspalum lentiginosum* Presl is clearly related to, if not identical with, *I. hemisphaericum* Poir., a relationship fully expressed in Urban's Flora by placing the two in juxtapo-

* A preliminary Enumeration of the Grasses of Porto Rico. Bull. Torrey Club, 30: 369-389. 10 J1 1903.

sition, but unfortunately the specimens cited at that place do not belong there, but are *Paspalum Underwoodii*, a quite different plant, and a relative of *P. densum* Poir., a fact which I distinctly pointed out when publishing *P. Underwoodii*.

Another inaccuracy is in making my *Paspalum Helleri* synonymous with *P. glabrum* Poir. The writer saw the type of the latter species at Paris, and it is a much more slender plant with smaller and glabrous spikelets.

But perhaps the most curious case of reduction is by Dr. Urban himself when he makes my *Monachne subglabra* a variety of *Eriochloa punctata*. No reason is given for this unless it be the words placed in parentheses, "non vid."

Three new species are described, all by Dr. Pilger: *Aristida Portoricensis*, *Eragrostis macropoda* and *Arthrostylidium sarmetosum*. One of these, *Eragrostis macropoda*, must be reduced to synonymy, for it is the true *Poa nitida* Ell., Dr. Pilger's remarks to the contrary notwithstanding. This is unfortunate, for the name *macropoda* is most appropriate, as the distinguishing feature is the long peduncle of the spikelets, a character mentioned by Elliott likewise when describing his *Poa nitida*; moreover, there is in the herbarium of Columbia University a specimen from Elliott, labeled in his own handwriting *Poa nitida*, which agrees with his own description of that species, so that the question is thereby taken out of the realm of uncertainty. Dr. Pilger remarks in a note that in *Eragrostis nitida* (*Poa nitida* Ell.) the spikelets are almost sessile, a statement clearly at variance with the facts, as pointed out above. There is a species with almost sessile spikelets, closely related to this, and inhabiting the same region, and it is probably this which Dr. Pilger has mistaken for the true *Poa nitida* Ell. I refer to the *Poa refracta* Muhl. [*Eragrostis refracta* (Muhl.) Scribn.].

The work is a welcome addition to the literature bearing upon the grasses of the West Indies, for it brings together in a concise manner a large proportion of the species found in that region, and for this a grateful appreciation and congratulations are extended.

GEORGE V. NASII.